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THE UNITED STATES
STRATEGIC BOMBING SURVEY

Report Pacific area, Nov. 39

NISSAN AUTOMOBILE COMPANY

(Nissan Jidosha K K)

CORPORATION REPORT No. XVIII

(Engines)

AIRCRAFT DIVISION

Dates of Survey:

24-25 November 1945

Date of Publication:

1 November 1946

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This report was written primarily for the use of the U. S. Strategic Bombing Survey in the preparation of further reports of a more comprehensive nature. Any conclusions or opinions expressed in this report must be considered as limited to the specific material covered and as subject to further interpretation in the light of further studies conducted by the Survey.

FOREWORD

The United States Strategic Bombing Survey was established by the Secretary of War on 3 November 1944, pursuant to a directive from the late President Roosevelt. Its mission was to conduct an impartial and expert study of the effects of our aerial attack on Germany, to be used in connection with air attacks on Japan and to establish a basis for evaluating the importance and potentialities of air power as an instrument of military strategy, for planning the future development of the United States armed forces, and for determining future economic policies with respect to the national defense. A summary report and some 200 supporting reports containing the findings of the survey in Germany have been published.

On 15 August 1945, President Truman requested that the survey conduct a similar study of the effects of all types of air attack in the war against Japan, submitting reports in duplicate to the Secretary of War and to the Secretary of the Navy. The officers of the survey during its Japanese phase were:

Franklin D'Olier, Chairman.
Paul H. Nitze,
Henry C. Alexander, Vice Chairmen.
Harry L. Bowman,
J. Kenneth Galbraith,
Rensis Likert,
Frank A. McNamee, Jr.,
Fred Searles, Jr.,
Monroe E. Spaght,
Dr. Lewis R. Thompson,
Theodore P. Wright,
Directors.
Walter Wilds, Secretary.

The survey's complement provided for 300 civilians, 350 officers, and 500 enlisted men. The military segment of the organization was drawn from the Army to the extent of 60 percent, and from the Navy to the extent of 40 percent. Both the Army and the Navy gave the survey all possible assistance in furnishing men, supplies, transport, and information. The survey operated from headquarters established in Tokyo early in September 1945, with subheadquarters in Nagoya, Osaka, Hiroshima, and Nagasaki, and with mobile teams operating in other parts of Japan, the islands of the Pacific, and the Asiatic mainland.

It was possible to reconstruct much of wartime Japanese military planning and execution, engagement by engagement, and campaign by campaign, and to secure reasonably accurate statistics on Japan's economy and war-production, plant by plant, and industry by industry. In addition, studies were conducted on Japan's over-all strategic plans and the background of her entry into the war, the internal discussions and negotiations leading to her acceptance of unconditional surrender, the course of health and morale among the civilian population, the effectiveness of the Japanese civilian defense organization, and the effects of the atomic bombs. Separate reports will be issued covering each phase of the study.

The survey interrogated more than 700 Japanese military, government, and industrial officials. It also recovered and translated many documents which not only have been useful to the survey, but also will furnish data valuable for other studies. Arrangements have been made to turn over the survey's files to the Central Intelligence Group, through which they will be available for further examination and distribution.

NISSAN AUTOMOBILE COMPANY

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NISSAN AUTOMOBILE COMPANY

THE CORPORATION AND ITS IMPORTANCE IN THE AIRCRAFT INDUSTRY

INTRODUCTION

Ordered into the aircraft engine field in 1943, the Nissan Automobile Co. (Nissan Jidosha K K) ranked sixth in engine production in the Japanese Empire for the years 1944 and 1945.

The principal plant of the Nissan Automobile Co. was located on reclaimed land in Yokohama outer harbor in Tokyo Bay, about 5,000 feet west of the mouth of the Tsurumi River and about 700 feet northeast of the Yokohama harbor passenger wharves.

In August 1943, because of the need to increase the rate of production of the Ha-11, a four-cylinder in-line 100-horsepower engine, the Japanese Government ordered the company to begin production of this engine. Since the Nissan Automobile Co. was one of the two largest automotive producers in the Empire, the plant at Yokohama was well-equipped to begin this new production, and steps were taken at that time to convert part of the Yokohama plant to aircraft engine manufacture.

Some of the personnel who formerly had worked on automotive engines were diverted to this new task, and one of the motor assembly buildings was utilized. From August 1943 until March 1944 parts were made but complete assemblies were not produced.

Beginning in March 1944 and continuing until December 1944, the plant produced approximately 100 engines monthly. In January 1945 the aircraft division of the Nissan Automobile Co. moved to its newly constructed plant at Yoshiwara, in Fuji-Gun, Shizuoka prefecture, near the coast, midway between Tokyo and Nagoya (appendix A).

This new plant was built during the last 6 months of 1944, and under ideal conditions it was planned to produce about 2,000 engines monthly. From February 1945 until August 1945 the new plant averaged a little over 100 per month. Concerned with the production of only a single product and ably staffed by engineers and laborers who were familiar with low-horsepower in-line automobile engines, the plant doubtlessly would have operated at peak capacity had not the air attack in July 1945 interrupted production.

EMPLOYEES

From August 1943, when production of aircraft engines first began, until July 1944, there was no distinction on the company rolls between automotive and aircraft division workers, therefore detailed information was not available. Peak employment was reached in July 1945 when 3,527 workers were employed at the Yoshiwara plant (table 1).

TABLE 1.—*Employment Schedule—August 1944–July 1945*

	Men	Women	Total	Productive	Nonproductive	Student	Total	New employees
<i>1944</i>								
August	836	367	1,203	693	331	179	1,203	-----
September	908	388	1,296	755	360	181	1,296	93
October	1,137	632	1,769	833	446	552	1,831	-----
November	1,334	651	1,985	898	429	658	1,985	473
December	1,406	676	2,082	824	544	714	2,082	97
<i>1945</i>								
January	1,719	691	2,410	877	568	965	2,410	328
February	2,042	989	3,031	1,096	736	1,200	3,032	622
March	2,261	1,000	3,261	1,166	697	1,398	3,261	229
April	2,216	1,095	3,311	1,139	841	1,331	3,311	50
May	2,257	1,116	3,373	1,105	852	1,416	3,373	62
June	2,239	1,196	3,435	1,173	871	1,391	3,435	62
July	2,295	1,232	3,527	1,181	888	1,458	3,527	92

Prior to January 1944 a single-shift basis was used, but from January 1944 until the end of the war, the company used a two-shift basis for adult employees and a two- or three-shift basis for students. Detailed information on the shifts worked is as follows:

January to September 1944:

Adults:	Percent
0720-1700	70
2000-0530	30
Students:	
0730-1500	40
1500-2230	30
2230-0500	30

September to August 1945:

0720-1530	70
0900-1730	30

DISPERSAL

Despite the impending increase in air attacks the Nissan Automobile officials planned to continue operations in the remaining concrete buildings at the Yoshiwara plant. Manufacture of small parts was dispersed, beginning 1 February 1945, to eight different locations, but it was planned to continue final assembly at Yoshiwara.

In dispersal, the already extensive buildings subcontractors were utilized (table 2). Since the subcontractors were located in relatively quiet areas (appendix B) and already well equipped with buildings, machines, and so experienced labor, it was planned to expand the existing facilities, supplement the smaller plants with employees from the Yoshiwara plant, thereby maintain approximately 50 percent normal production.

TABLE 2.—*Dispersal Chart*

Name of Plant	Location	Type of plant	Map position (appendix B)	Area (square feet)	Number of workers	Number of machines	Percent completed	Parts machined
Mochizuki Ironworks	Shimizu	Subcontractor	A	3,600	50	30	70	Bolts, studs, nuts.
Seki Ironworks	Takaoka	do	D	1,800	20	24	95	Manifolds, crankcase
Marushin Plant	Yoshiwara	Tool plant	E	5,400	80	50	15	Valves, valve rock bearings.
Katsumata Ironworks	do	Subcontractor	F	5,400	25	17	100	Impulse starter parts.
Suruga Ironworks	do	do	H	4,500	45	34	100	Bushings, small engine parts.
Hori Ironworks	Yoshinaga	do	J	3,600	40	33	100	Pistons, front cover
Yoshinaga Ironworks	do	do	K	3,060	20	18	65	Gear blanks.
Dengyosha Ironworks	Mishima	do	L	2,160	20	16	70	Propeller bosses, engine cases.

THE AIR ATTACKS

ATTACKS ON PLANTS

Nissan Automobile Co. suffered only one attack: on 30 July 1945 the Yoshiwara plant was struck by naval carrier-based aircraft. Beginning at 0730 and striking at various times during the day, our rocket-firing fighters and torpedo planes damaged approximately 35,000 sq. ft. of floor area. Some machine tools were destroyed and about 15 casualties were sustained, one of which was a fatality (appendix A). Plant officials estimated that repair of damaged buildings would

require about 3 months. Production dropped from 127 units in July to 21 in August.

The plant manager was the nominal head of the air raid defense system, and the plant employed 20 regular spotters, 30 firemen, and 30 members of an organized rescue squad. Only two hand-operated fire pumps were available. Air trenches within the plant compound could accommodate 2,500 workers, and facilities were constructed outside of the plant to protect the remainder of the employees.

PRODUCTION STATISTICS

Maximum capacity of the company was 1,240 engines during 1944 and 1,520 engines for the first 8 months of 1945 (fig. 1).

During 1944 Nissan produced 911 engines, which represented 2 percent of total Japanese engine production and 62 percent of total Ha-11 production. From January until August 1945 a

total of 722 engines was produced, representing approximately 6 percent of total Japanese production and 71 percent of Ha-11 production for the year.

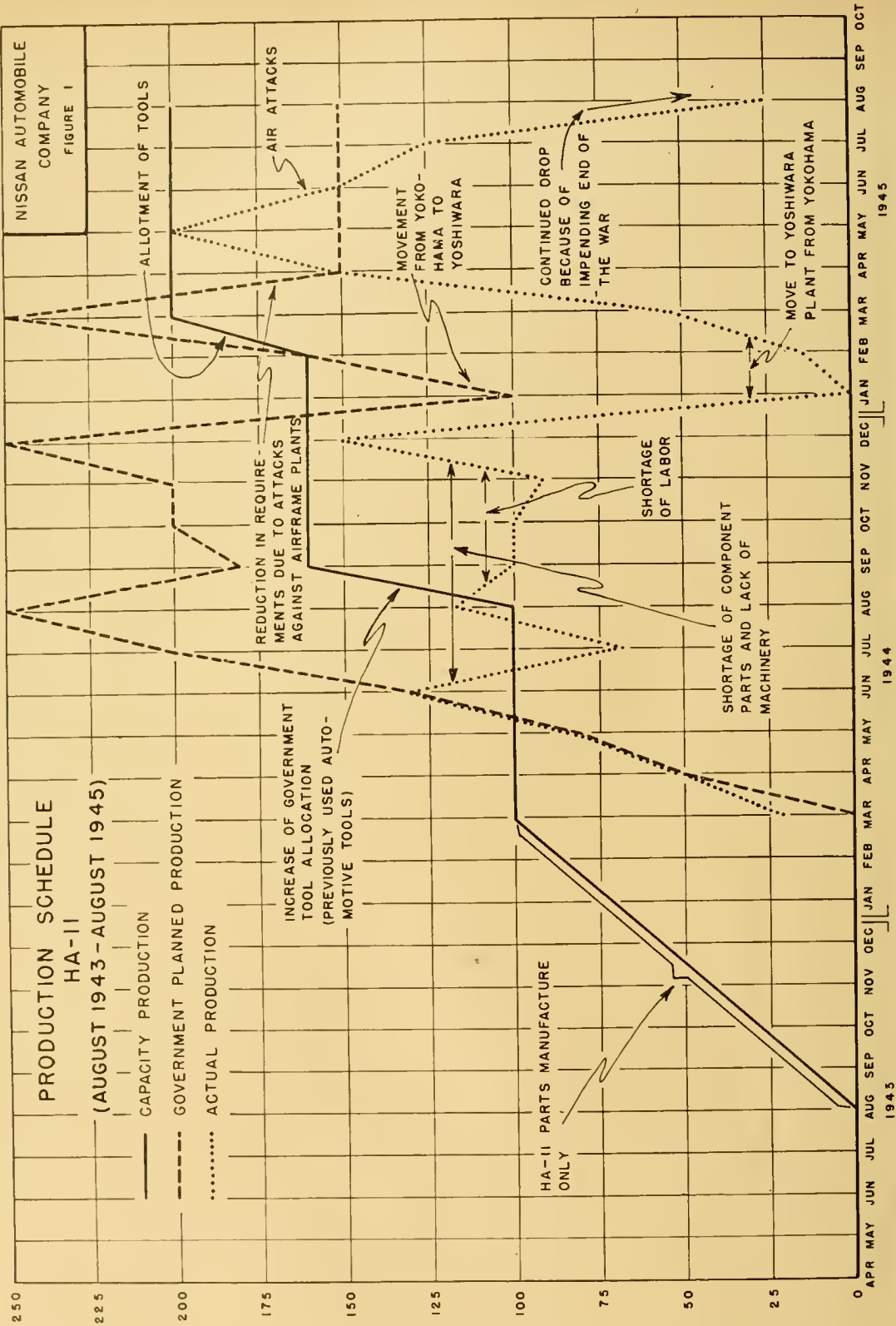
Percentages of actual production to government-planned production, were extremely high; 95 percent for 1944 and 96 percent for 1945.

EVALUATION OF PRE-ATTACK INTELLIGENCE

Generally, the information relative to the position of Nissan Automobile Co. in the aircraft industry was incorrect. Joint Target Group reported the possibility of the company being engaged in production of aircraft parts for Nakajima, and other intelligence sources listed both radial aircraft engines and airframes as possible products. Similarly, WD Military Intelligence Service G-2 files do not reveal any information

that the company was an actual contributor to the aircraft industry.

None of the products thus credited to the company were ever produced. The general lack of reliable information is due probably to the company's late entry into this field and its relatively limited production of the small Ha-11 engine.

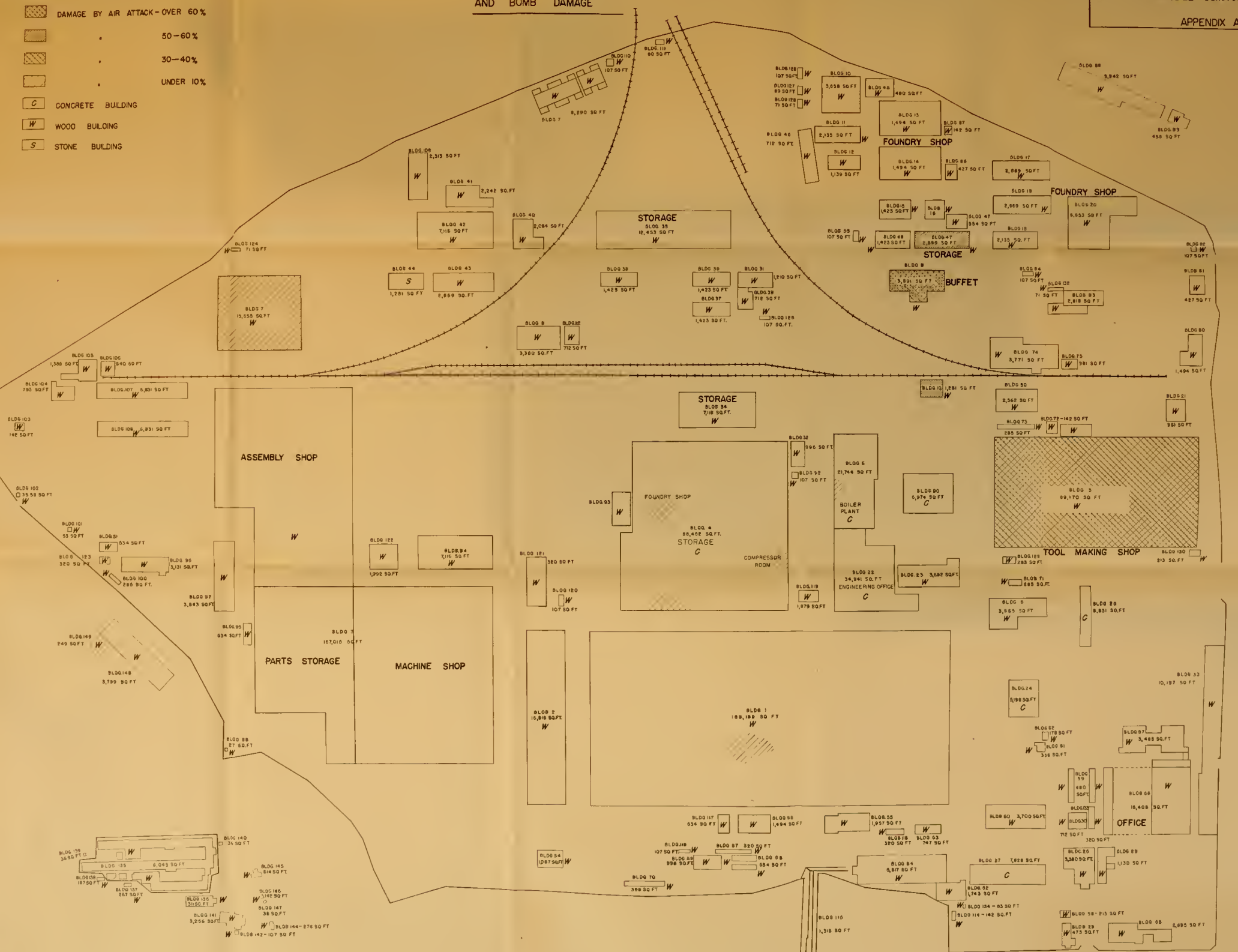


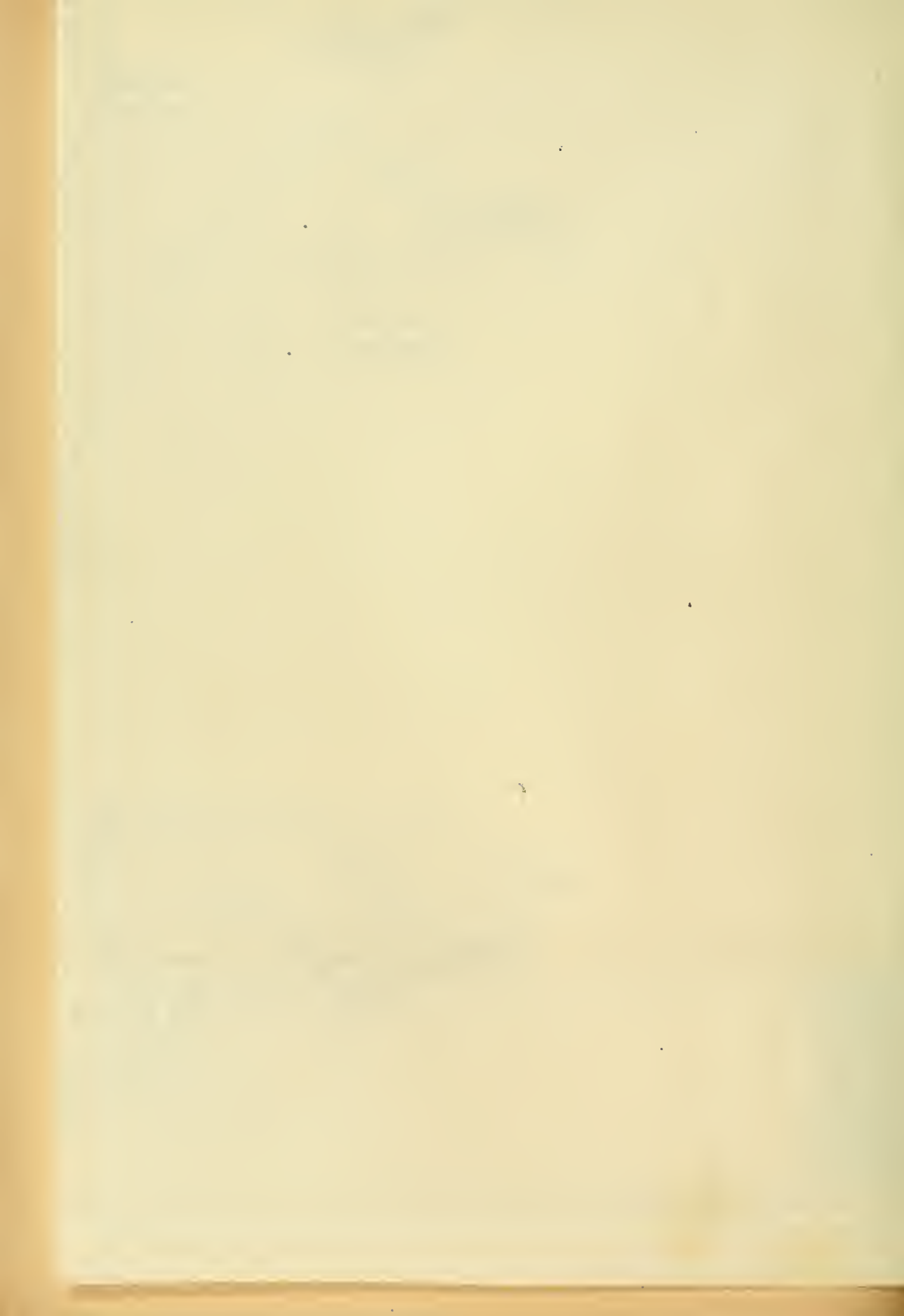
LEGEND

- DAMAGE BY AIR ATTACK - OVER 60%
- 50-60%
- 30-40%
- UNDER 10%
- C CONCRETE BUILDING
- W WOOD BUILDING
- S STONE BUILDING

YOSHIWARA PLANT LAYOUT AND BOMB DAMAGE

U.S. STRATEGIC BOMBING SURVEY
NISSAN AUTOMOBILE COMPANY
APPENDIX A





LEGEND

- ⊙ MAIN PLANT
- DISPERSED UNIT
- RAILROAD
- STATION
- ROAD NETWORK
- RIVER

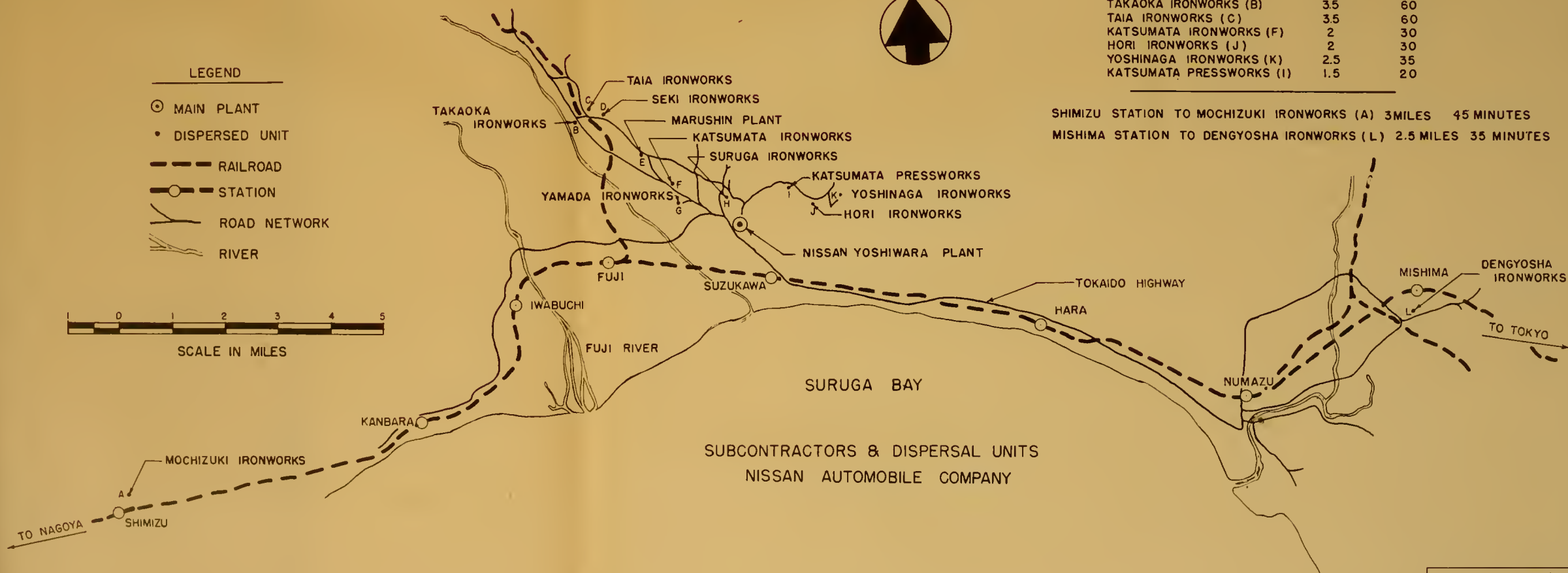


SCALE IN MILES



DISTANCE AND TIME FROM YOSHIWARA PLANT		
TO	MILES	MINUTES
SUZUKAWA STATION	2.8	40
SURUGA IRONWORKS (H)	1	15
YAMADA IRONWORKS (G)	1	15
MARUSHIN PLANT (E)	2.5	35
SEKI IRONWORKS (D)	3.5	60
TAKAOKA IRONWORKS (B)	3.5	60
TAIA IRONWORKS (C)	3.5	60
KATSUMATA IRONWORKS (F)	2	30
HORI IRONWORKS (J)	2	30
YOSHINAGA IRONWORKS (K)	2.5	35
KATSUMATA PRESSWORKS (I)	1.5	20

SHIMIZU STATION TO MOCHIZUKI IRONWORKS (A) 3 MILES 45 MINUTES
MISHIMA STATION TO DENGYOSHA IRONWORKS (L) 2.5 MILES 35 MINUTES



SUBCONTRACTORS & DISPERSAL UNITS
NISSAN AUTOMOBILE COMPANY

U S STRATEGIC BOMBING SURVEY

NISSAN
AUTOMOBILE COMPANY
APPENDIX B

UNITED STATES STRATEGIC BOMBING SURVEY

LIST OF REPORTS

The following is a bibliography of reports resulting from the Survey's studies of the European and Pacific wars. Certain of these reports may be purchased from the Superintendent of Documents at the Government Printing Office, Washington, D. C. Permission to examine the remaining reports may be had by writing to the Headquarters of the Survey at Gravelly Point, Washington 25, D. C.

European War

OFFICE OF THE CHAIRMAN

- 1 The United States Strategic Bombing Survey: Summary Report (European War)
- 2 The United States Strategic Bombing Survey: Over-all Report (European War)
- 3 The Effects of Strategic Bombing on the German War Economy

AIRCRAFT DIVISION

(By Division and Branch)

- 4 Aircraft Division Industry Report
- 5 Inspection Visits to Various Targets (Special Report)

Airframes Branch

- 6 Junkers Aircraft and Aero Engine Works, Dessau, Germany
- 7 Erla Maschinenwerke G m b H, Heiterblick, Germany
- 8 A T G Maschinenbau, G m b H, Leipzig (Mockau), Germany
- 9 Gothaer Waggonfabrik, A G, Gotha, Germany
- 10 Focke Wulf Aircraft Plant, Bremen, Germany
- 11 Messerschmitt A G, Augsburg, Germany
 - { Over-all Report
 - { Part A
 - { Part B
 - { Appendices I, II, III
- 12 Dornier Works, Friedrichshafen & Munich, Germany
- 13 Gerhard Fieseler Werke G m b H, Kassel, Germany
- 14 Wiener Neustaedter Flugzeugwerke, Wiener Neustadt, Austria

Aero Engines Branch

- 15 Bussing NAG Flugmotorenwerke G m b H, Brunswick, Germany
- 16 Mittel-Deutsche Motorenwerke G m b H, Taucha, Germany
- 17 Bavarian Motor Works Inc, Eisenach & Durrerhof, Germany
- 18 Bayerische Motorenwerke A G (BMW) Munich, Germany
- 19 Henschel Flugmotorenwerke, Kassel, Germany

Light Metal Branch

- 20 Light Metals Industry of Germany
 - { Part I, Aluminum
 - { Part II, Magnesium

- 21 Vereinigte Deutsche Metallwerke, Hildesheim, Germany
- 22 Metallgussgesellschaft G m b H, Leipzig, Germany
- 23 Aluminiumwerk G m b H, Plant No. 2, Bitterfeld, Germany
- 24 Gebrueder Giulini G m b H, Ludwigshafen, Germany
- 25 Luftschiffbau, Zeppelin G m b H, Friedrichshafen on Bodensee, Germany
- 26 Wieland Werke A G, Ulm, Germany
- 27 Rudolph Rautenbach Leichmetallgiessereien, Solingen, Germany
- 28 Lippewerke Vereinigte Aluminiumwerke A G, Lunen, Germany
- 29 Vereinigte Deutsche Metallwerke, Hedderheim, Germany
- 30 Duereuer Metallwerke A G, Duren Wittenau-Berlin & Waren, Germany

AREA STUDIES DIVISION

- 31 Area Studies Division Report
- 32 A Detailed Study of the Effects of Area Bombing on Hamburg
- 33 A Detailed Study of the Effects of Area Bombing on Wuppertal
- 34 A Detailed Study of the Effects of Area Bombing on Dusseldorf
- 35 A Detailed Study of the Effects of Area Bombing on Solingen
- 36 A Detailed Study of the Effects of Area Bombing on Remscheid
- 37 A Detailed Study of the Effects of Area Bombing on Darmstadt
- 38 A Detailed Study of the Effects of Area Bombing on Lubeck
- 39 A Brief Study of the Effects of Area Bombing on Berlin, Augsburg, Bochum, Leipzig, Hagen, Dortmund, Oberhausen, Schweinfurt, and Bremen

CIVILIAN DEFENSE DIVISION

- 40 Civilian Defense Division—Final Report
- 41 Cologne Field Report
- 42 Bonn Field Report
- 43 Hanover Field Report
- 44 Hamburg Field Report—Vol I, Text; Vol II, Exhibits
- 45 Bad Oldesloe Field Report
- 46 Augsburg Field Report
- 47 Reception Areas in Bavaria, Germany

EQUIPMENT DIVISION

Electrical Branch

- 48 German Electrical Equipment Industry Report
- 49 Brown Boveri et Cie, Mannheim Kafertal, Germany

Optical and Precision Instrument Branch

- 50 Optical and Precision Instrument Industry Report

Abrasives Branch

- 51 The German Abrasive Industry
- 52 Mayer and Schmidt, Offenbach on Main, Germany

Anti-Friction Branch

- 53 The German Anti-Friction Bearings Industry

Machine Tools Branch

- 54 Machine Tools & Machinery as Capital Equipment
- 55 Machine Tool Industry in Germany
- 56 Herman Kolb Co., Cologne, Germany
- 57 Collet and Engelhard, Offenbach, Germany
- 58 Naxos Union, Frankfurt on Main, Germany

MILITARY ANALYSIS DIVISION

- 59 The Defeat of the German Air Force
- 60 V-Weapons (Crossbow) Campaign
- 61 Air Force Rate of Operation
- 62 Weather Factors in Combat Bombardment Operations in the European Theatre
- 63 Bombing Accuracy, USAAF Heavy and Medium Bombers in the ETO
- 64 Description of RAF Bombing
- 64a The Impact of the Allied Air Effort on German Logistics

MORALE DIVISION

- 64b The Effects of Strategic Bombing on German Morale

Medical Branch

- 65 The Effect of Bombing on Health and Medical Care in Germany

MUNITIONS DIVISION

Heavy Industry Branch

- 66 The Coking Industry Report on Germany
- 67 Coking Plant Report No. 1, Sections A, B, C, & D
- 68 Gutchoffnungshuette, Oberhausen, Germany
- 69 Friedrich-Alfred Huette, Rheinhausen, Germany
- 70 Neunkirchen Eisenwerke A G, Neunkirchen, Germany
- 71 Reichswerke Hermann Goering A G, Hallendorf, Germany
- 72 August Thyssen Huette A G, Hamborn, Germany
- 73 Friedrich Krupp A G, Borbeck Plant, Essen, Germany
- 74 Dortmund Hoerder Huetteneverein, A G, Dortmund, Germany
- 75 Hoesch A G, Dortmund, Germany
- 76 Bochumer Verein fuer Gusstahlfabrikation A G, Bochum, Germany

Motor Vehicles and Tanks Branch

- 77 German Motor Vehicles Industry Report
- 78 Tank Industry Report
- 79 Daimler Benz A G, Unterturkheim, Germany
- 80 Renault Motor Vehicles Plant, Billancourt, Paris
- 81 Adam Opel, Russelsheim, Germany
- 82 Daimler Benz-Gaggenau Works, Gaggenau, Germany
- 83 Maschinenfabrik Augsburg-Nurnberg, Nurnberg, Germany
- 84 Auto Union A G, Chemnitz and Zwickau, Germany
- 85 Henschel & Sohn, Kassel, Germany
- 86 Maybach Motor Works, Friedrichshafen, Germany
- 87 Voigtlander, Maschinenfabrik A G, Plauen, Germany
- 88 Volkswagenwerke, Fallersleben, Germany
- 89 Bussing NAG, Brunswick, Germany
- 90 Muehlenbau Industrie A G (MiaG) Brunswick, Germany
- 91 Friedrich Krupp Grusonwerke, Magdeburg, Germany

Submarine Branch

- 92 German Submarine Industry Report
- 93 Maschinenfabrik Augsburg-Nurnberg A G, Augsburg, Germany
- 94 Blohm and Voss Shipyards, Hamburg, Germany
- 95 Deutsche Werke A G, Kiel, Germany
- 96 Deutsche Schiff und Maschinenbau, Bremen, Germany
- 97 Friedrich Krupp Germaniawerft, Kiel, Germany
- 98 Howaldtswerke A G, Hamburg, Germany
- 99 Submarine Assembly Shelter, Farge, Germany
- 100 Bremer Vulkan, Vegesack, Germany

Ordnance Branch

- 101 Ordnance Industry Report
- 102 Friedrich Krupp Grusonwerke A G, Magdeburg, Germany
- 103 Bochumer Verein fuer Gusstahlfabrikation A G, Bochum, Germany
- 104 Henschel & Sohn, Kassel, Germany
- 105 Rheinmetall-Borsig, Dusseldorf, Germany
- 106 Hermann Goering Werke, Braunschweig, Hallendorf, Germany
- 107 Hannoverische Maschinenbau, Hanover, Germany
- 108 Gusstahlfabrik Friedrich Krupp, Essen, Germany

OIL DIVISION

- 109 Oil Division, Final Report
- 110 Oil Division, Final Report, Appendix
- 111 Powder, Explosives, Special Rockets and Jet Propellants, War Gases and Smoke Acid (Ministerial Report #1)
- 112 Underground and Dispersal Plants in Greater Germany
- 113 The German Oil Industry, Ministerial Report Teil 78
- 114 Ministerial Report on Chemicals

Oil Branch

- 115 Ammoniakwerke Merseburg G m b H, Leuna, Germany—2 Appendices
- 116 Braunkohle Benzin A G, Zeitz and Bohlen, Germany
- 117 Wintershall A G, Leutskendorf, Germany
- 117 Ludwigshafen-Opau Works of I G Farbenindustrie A G, Ludwigshafen, Germany
- 118 Ruhroel Hydrogenation Plant, Bottrop-Boy, Germany, Vol. I, Vol. II
- 119 Rhenania Ossag Mineraloelwerke A G, Harburg Refinery, Hamburg, Germany
- 120 Rhenania Ossag Mineraloelwerke A G, Grasbrunn Refinery, Hamburg, Germany
- 121 Rhenania Ossag Mineraloelwerke A G, Wilhelmsburg Refinery, Hamburg, Germany
- 122 Gewerkschaft Victor, Castrop-Rauxel, Germany, Vol. I & Vol. II
- 123 Europaeische Tanklager und Transport A G, Hamburg, Germany
- 124 Ebano Asphalt Werke A G, Harburg Refinery, Hamburg, Germany
- 125 Meerbeck Rheinpreussen Synthetic Oil Plant—Vol. I & Vol. II

Rubber Branch

- 126 Deutsche Dunlop Gummi Co., Hanau on Main, Germany
- 127 Continental Gummiwerke, Hanover, Germany
- 128 Duels Synthetic Rubber Plant
- 129 Ministerial Report on German Rubber Industry

Propellants Branch

- 0 Elektrochemischewerke, Munich, Germany
- 1 Schoenebeck Explosive Plant, Lignose Sprengstoff Werke G m b H, Bad Salzungen, Germany
- 2 Plants of Dynamit A G, Vormal, Alfred Nobel & Co, Troisdorf, Clausthal, Drummel and Duneberg, Germany
- 3 Deutsche Sprengchemie G m b H, Kraiburg, Germany

OVERALL ECONOMIC EFFECTS DIVISION

- 4 Overall Economic Effects Division Report
 - Gross National Product
 - Kriegsberichte
 - Herman Goering Works
 - Food and Agriculture
- 4a Industrial Sales Output and Productivity

PHYSICAL DAMAGE DIVISION

- 4b Physical Damage Division Report (ETO)
- 5 Villacoublay Airdrome, Paris, France
- 6 Railroad Repair Yards, Malines, Belgium
- 7 Railroad Repair Yards, Louvain, Belgium
- 8 Railroad Repair Yards, Hasselt, Belgium
- 9 Railroad Repair Yards, Namur, Belgium
- 0 Submarine Pens, Brest, France
- 1 Powder Plant, Angoulême, France
- 2 Powder Plant, Bergerac, France
- 3 Coking Plants, Montigny & Liege, Belgium
- 4 Fort St. Blaise Verdun Group, Metz, France
- 5 Gnome et Rhone, Limoges, France
- 6 Michelin Tire Factory, Clermont-Ferrand, France
- 7 Gnome et Rhone Aero Engine Factory, Le Mans, France
- 8 Kugelfischer Bearing Ball Plant, Ebelsbach, Germany
- 9 Louis Breguet Aircraft Plant, Toulouse, France
- 0 S. N. C. A. S. E. Aircraft Plant, Toulouse, France
- 1 A. L. A. Aircraft Plant, Toulouse, France
- 2 V Weapons in London
- 3 City Area of Krefeld
- 4 Public Air Raid Shelters in Germany
- 5 Goldenberg Thermal Electric Power Station, Knap-sack, Germany
- 6 Brauweiler Transformer & Switching Station, Brauweiler, Germany
- 7 Storage Depot, Nabbollenbach, Germany
- 8 Railway and Road Bridge, Bad Munster, Germany
- 9 Railway Bridge, Eller, Germany
- 0 Gustloff-Werke Weimar, Weimar, Germany
- 1 Henschell & Sohn G m b H, Kassel, Germany
- 2 Area Survey at Pirmasens, Germany
- 3 Hanomag, Hanover, Germany
- 4 M A N Werke Augsburg, Augsburg, Germany
- 5 Friedrich Krupp A G, Essen, Germany
- 6 Erla Maschinenwerke, G m b H, Heiterblick, Germany
- 7 A T G Maschinenbau G m b H, Mockau, Germany
- 8 Erla Maschinenwerke G m b H, Mockau, Germany
- 9 Bayerische Motorenwerke, Durrerhof, Germany
- 0 Mittel-Deutsche Motorenwerke G m b H, Taucha, Germany
- 1 Submarine Pens Deutsche-Werft, Hamburg, Germany
- 2 Multi-Storied Structures, Hamburg, Germany
- 3 Continental Gummiwerke, Hanover, Germany
- 4 Kassel Marshalling Yards, Kassel, Germany
- 5 Ammonia Werke, Merseburg-Leuna, Germany
- 6 Brown Boveri et Cie, Mannheim, Kafertal, Germany
- 7 Adam Opel A G, Russelsheim, Germany
- 8 Daimler-Benz A G, Unterturkheim, Germany
- 9 Valentin Submarine Assembly, Farge, Germany
- 0 Volkswaggonwerke, Fallersleben, Germany
- 1 Railway Viaduct at Bielefeld, Germany
- 2 Ship Yards Howaldtswerke, Hamburg, Germany
- 3 Blohm and Voss Shipyards, Hamburg, Germany

- 184 Daimler-Benz A G, Mannheim, Germany
- 185 Synthetic Oil Plant, Meerbeck-Hamurg, Germany
- 186 Gewerkschaft Victor, Castrop-Rauxel, Germany
- 187 Klockner Humboldt Deutz, Uhm, Germany
- 188 Ruhroel Hydrogenation Plant, Bottrop-Boy, Germany
- 189 Neunkirchen Eisenwerke A G, Neunkirchen, Germany
- 190 Railway Viaduct at Altenbecken, Germany
- 191 Railway Viaduct at Arnburg, Germany
- 192 Deurag-Nerag Refineries, Misburg, Germany
- 193 Fire Raids on German Cities
- 194 I G Farbenindustrie, Ludwigshafen, Germany, Vol. I & Vol. II
- 195 Roundhouse in Marshalling Yard, Uhm, Germany
- 196 I G Farbendustrie, Leverkusen, Germany
- 197 Chemische-Werke, Huels, Germany
- 198 Gremberg Marshalling Yard, Gremberg, Germany
- 199 Locomotive Shops and Bridges at Hamm, Germany

TRANSPORTATION DIVISION

- 200 The Effects of Strategic Bombing on German Transportation
- 201 Rail Operations Over the Brenner Pass
- 202 Effects of Bombing on Railroad Installations in Regensburg, Nurnberg and Munich Divisions.
- 203 German Locomotive Industry During the War
- 204 German Military Railroad Traffic

UTILITIES DIVISION

- 205 German Electric Utilities Industry Report
- 206 1 to 10 in Vol. I "Utilities Division Plant Reports"
- 207 11 to 20 in Vol. II "Utilities Division Plant Reports"
- 208 21 Rheinische-Westfalische Elektrizitaetswerk A G

Pacific War

OFFICE OF THE CHAIRMAN

- 1 Summary Report (Pacific War)
- 2 Japan's Struggle to End The War
- 3 The Effects of Atomic Bombs on Hiroshima and Nagasaki

CIVILIAN STUDIES

Civilian Defense Division

- 4 Field Report Covering Air Raid Protection and Allied Subjects, Tokyo, Japan
- 5 Field Report Covering Air Raid Protection and Allied Subjects, Nagasaki, Japan
- 6 Field Report Covering Air Raid Protection and Allied Subjects, Kyoto, Japan
- 7 Field Report Covering Air Raid Protection and Allied Subjects, Kobe, Japan
- 8 Field Report Covering Air Raid Protection and Allied Subjects, Osaka, Japan
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